

# Article Beyond Airbnb. Determinants of Customer Satisfaction in P2P Accommodation in Time of COVID-19

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**Abstract:** As the P2P (peer-to-peer) accommodation market is expanding, there is a growing interest in the factors affecting customer satisfaction. The previous literature largely concentrates on Airbnb users and tends to use online questionnaires as research data. To address this gap, we analyze the key attributes affecting customer satisfaction in the P2P accommodation market in 2020, the first year of the pandemic, based on onsite research. This will allow the authors to examine the key determinants of customer satisfaction across many platforms. Based on previous research, a conceptual model was developed, and two dimensions of service quality were created: host service quality and facility service quality. An offline primary survey was conducted, and the model was tested using exploratory factor analysis, correlation analysis, and regression analysis. The empirical results show a strong relationship between host service quality and facility service quality and customer satisfaction. This study provides clear theoretical insights to advance our knowledge about the determinants of customer satisfaction. Our results are in line with previous research, despite the survey being conducted during the first year of the pandemic and with the use of offline questionnaires. Furthermore, this study offers practical implications for both peer-to-peer and institutional market actors.

**Keywords:** customer satisfaction; P2P accommodation market; exploratory factor analysis; service quality; COVID-19

# 1. Introduction

The sharing economy refers to the P2P (peer-to-peer) online marketplace that allows individuals to optimize the use of their idle resources [1]. Its emergence was associated with the foundation of Airbnb, whose business model became iconic and irrevocably transformed the tourism market worldwide. The innovation of a new technology-driven distribution platform allowed Airbnb to grow to the point of affecting existing accommodation providers in the second decade of the XXI century [1,2]. Soon, its model was adopted by other tourism intermediaries, especially in urban areas. The unprecedented surge of the P2P accommodation market in the second decade of the 21st century has only been temporarily interrupted by the COVID-19 pandemic. In fact, the supply in this market is much more flexible than the hotel supply [3] and can adjust faster to pandemic shock [4]. Airbnb, the leading and iconic intermediary in the P2P accommodation market, has revolutionized the hospitality market worldwide. Although its impact can be seen in all destinations, the most profound market changes are observed in urban areas [5]. Following these changes, scientific research on P2P accommodation is booming, with Airbnb being an important focus of tourism academics, while other intermediaries and P2P markets outside urban areas are neglected [6,7]. The development of the P2P accommodation market is closely related to the sustainable development of any destination. In rural and protected areas, it has traditionally been considered a sustainable form of consumption that is associated with less production of emissions and chemicals, less construction and



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**Copyright:** © 2022 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https:// creativecommons.org/licenses/by/ 4.0/). landscape destruction, and better quality of life for locals. In more recent literature, this view has been questioned as the rapid development of Airbnb in city destinations often leads to overtourism, unfair competition, increase in the overall cost of living, congestion, increase in the price of real estate, etc. [8]. Inevitably, the growing number of suppliers in the P2P accommodation market has led to more intense competition in terms of both the product and its delivery, which soon gained the attention of tourism research. Achieving high customer satisfaction leads to more loyal customers [9] and improves traditional and electronic word-of-mouth [10,11]. Empirical evidence exists that two main dimensions of service quality determine customer satisfaction: host service quality and facility service quality [12,13]. The former relates to product delivery while the latter deals with the tangible elements of P2P accommodations and their location. Existing studies show that both dimensions positively impact overall customer satisfaction [14,15]. All the studies, however, are based on the exclusive research of Airbnb users and were conducted online. This may affect the findings, as tourism memories may differ during and after product consumption [16].

Accordingly, the aim of this article is to investigate the interrelationship between service quality dimensions and customer satisfaction in P2P accommodation, based on the onsite research with tourists who made a purchase both with Airbnb and other distribution channels. In 2020, we conducted our research in Croatia, a popular leisure destination, using traditional questionnaires. Following the previous research, we used exploratory factor analysis, correlation analysis, and regression analysis [17,18].

Next, this paper presents the relevant literature on service quality and customer satisfaction in the P2P accommodation market. The conceptual model and hypothesis development are described. The research design is then presented, and the results are discussed. The discussion, practical and theoretical implications, and future research avenues constitute the last part of this paper.

#### 2. Theoretical Background

# 2.1. P2P Accommodation Market

A peer-to-peer market is characterized by a great heterogeneity of both production and consumption. Such markets have been fundamentally transformed by the introduction of internet platforms that operate as a de facto intermediary. eBay and other platforms have managed to significantly lower both transaction costs and information asymmetry, thus not only increasing the efficiency of existing markets but also helping to create many new markets [19].

In the accommodation market, this is reflected by the supply represented by individuals offering their houses or rooms to tourists. However, the peer-to-peer (P2P) accommodation sector existed long before sharing economy platforms emerged, as the renting of idle rooms to tourists was common in numerous tourism resorts. P2P supply and demand were brought together not only through traditional travel agencies and catalogs but also at transportation hubs such as railway or bus stations where local providers would look for potential prospects. Moreover, there were many repeat visitors, and traditional word-of-mouth was important in acquiring new customers. As in markets for tangible goods, new internet-based intermediaries (e.g., Expedia) started to operate in hospitality in the last decade of the twentieth century [20]. At first, their primary focus was the hotel market. Only about ten years later was the first hospitality P2P intermediary, called a sharing economy platform, launched. In fact, in current academic discourse, the P2P accommodation sector is often associated solely with an Airbnb-mediated market, e.g., [21], and to a much lesser extent with other, new sharing economy platforms. Indeed, Airbnb, a new intermediary, managed to revolutionize the hospitality market in the second decade of the 21st century. The platform itself claims to be used worldwide by 4 million hosts that managed 5.6 million listings in 2020 [22]. Its growth has completely changed the hospitality market in many urban destinations by expanding the supply base, increasing supply elasticity, and lowering prices. Although Airbnb is credited with having a very

wide coverage of P2P supply in urban areas, in rural and resort locations, other distribution channels are still very important.

The growing competition among P2P accommodation providers has been paralleled by the surging academic interest in service quality and customer satisfaction in this segment of the hospitality market. Early research in this area drew inevitably on the existing knowledge from the traditional hospitality field. Therefore, prior to examining previous studies, it is instrumental to stress the differences between traditional and P2P accommodation services. These differences can be examined in the field of the tangible elements of products and social interactions. Providers in the P2P market are not limited by most industryspecific regulations that apply to traditional hospitality providers [23]. Hence, service characteristics such as room size and amenities are much less predictable in the P2P market than in traditional hospitality. Still, sharing economy platforms have managed to successfully address this area of information asymmetry by requiring detailed descriptions of the offered apartments, along with photos. Another, and from the perspective of service quality, much more important difference between traditional and P2P hospitality lies in the social interaction between hosts and guests or, as [24,25] put it, in the area of technical quality. Social interaction is a vital part of both service quality and customer satisfaction in hospitality. Technical quality refers to three major dimensions of hospitality service: 1. sociability (behavior of the people within the service setting), 2. valence (postconsumption assessments), and 3. waiting time [26]. In traditional hospitality, social interaction refers to the relationship between guests and personnel, while in P2P, the personal characteristics of the host often play an important part in social interaction. In fact, some sharing economy platforms ask tourists to evaluate both the premises they stayed in and the host's attitude. In sharing economy platforms where accommodation is provided without monetary payment (e.g., CouchSurfing), social interaction is even the raison d'etre for both being a host and a guest [27]. Indeed, a host's personal photo is one of the key elements in establishing trust between transaction parties [28]. Another major difference between the P2P and traditional hospitality market is the distinction between supply and demand. Whereas in the traditional market, supply is represented by hotel entrepreneurs, and demand consists of tourists and intermediaries, in the P2P market, there are, as the name suggests, peers from both sides of market exchange. As a result, some peers using one Airbnb account, for example, can have experience as both a guest and a host. This led Moon et al. [29] to examine both host satisfaction and guest satisfaction with Airbnb, which is rare in traditional hospitality.

#### 2.2. Systematic Literature Review

In order to assess the current research on service quality in relation to customer satisfaction in the P2P accommodation market, a systematic literature review was adopted. We searched for academic contributions in the Web of Science database, which is commonly used in studies based on systematic literature reviews. As a search string, we looked for three blocks. The first and second blocks referred to service quality and satisfaction, respectively, while the third looked at the P2P accommodation market (Table 1). Moreover, we limited our search to contributions written in English.

 Table 1. Systematic literature review search strings.

Block	Search Term
Service Quality	Service Quality
Satisfaction	Satisfaction
P2P accommodation	"short term rental" OR "accommodation AND sharing" or "P2P accommodation" OR "peer-to-peer accommodation" OR "Peer-to-peer accommodations" OR Airbnb OR tujia OR Xiaozhu OR homeaway

The original search, conducted on 1 September 2021, resulted in 32 academic contributions. Six contributions were eliminated in abstract screening, and another six contributions in the full text screening stage. We removed those papers as they did not deal with attempts to measure or provide theoretical insights about either service quality or consumer satisfaction. Additionally, one paper was removed as we were not able to find its full text.

The final database resulted in 19 research papers that were written on average by 3.11 authors, which is an average figure in economics and management sciences. The geographical distribution of first-author affiliation is also similar to previous systematic literature studies, where the U.S.A. (five papers) and the U.K. (three papers) are at the top. Three academics authored two papers each, while the remaining academics authored only one each. Not surprisingly, hospitality journals were chosen most often to publish this research, with the *International Journal of Hospitality Management* (four) and *International Journal of Contemporary Hospitality Management* (three) being at the top of the list. Finally, similar to other reviews in the field of the sharing economy, the majority of results were relatively recent publications, with only one contribution published in 2015, three in 2017, three in 2018, three in 2019, six in 2020, and three in 2021. Not all of the contributions focused on the relationship between service quality and customer satisfaction; some addressed only one of the two concepts.

#### 2.3. Service Quality and Customer Satisfaction in the P2P Accommodation Market

Do key service quality dimensions have a direct effect on customer satisfaction and repurchase intention? Among the very few previous studies examining the influence of specific service quality dimensions on satisfaction and repurchase intention, the empirical results show conflicting findings.

Measuring service quality is usually based on the general hospitality approach or, to a lesser extent, on studies from other sharing economy areas. The studies in our review used two main methods to evaluate service quality: an online survey (seven papers) and an analysis of reviews (four papers). The analysis of reviews, in all four cases, was based on data from the website of the nonprofit organization Inside Airbnb, which provides scraped data from the Airbnb website for numerous destinations. These enormous datasets (ranging from 215 k to 3 m reviews) were analyzed using specialized software, which had two approaches.

In the first approach, the goal was to identify major keywords occurring in reviews and then cluster them into topics [30,31]. The clusters that were identified consisted of: overall evaluation of the stay, the location of the unit, the physical accommodation unit and the building itself, or the hosts' management of the listed accommodation in [31], or pleasure and joy, neighborhood, hosting and value, in the work of [30]. In comparison with traditional hospitality, there is a greater emphasis on safety and security, the different ways that guests interact with hosts, and listings accuracy [31]. The second approach used sentiment analysis which was based on identifying positive and negative expressions in reviews, assigning them a value of either 1 or 0, and finally, calculating a sentiment score [32,33]. Similar to previous studies, researchers found that hosts with fewer rooms can be more focused on guests and, consequently, receive higher rating scores, which is a signal of service quality [33]. Güçlü et al. [32] found that the area of "tangible and host characteristics" related to the host encounter experience and accommodation facilities is very important for tourists.

The second group of papers dealt with contributions where various service quality aspects were operationalized in structural equation models using customer-based quantitative opinions. Here, service quality was conceptualized mostly as multiple constructs. The only two exceptions were the early work of Möhlmann [15] and Lalicic & Weismayer [9], where the service quality was operationalized as a single construct. The number of constructs relating to service quality in the remaining contributions ranges from two in the work of Huarng & Yu [14], where only "network platform service quality" and "lodging service quality" were identified, to as many as six in [13]. Service quality construct(s) were

mostly used as predictors in structural equation modeling (SEM). In a contribution by C.V. Priporas, Stylos, Rahimi, et al. [34], service quality functioned both as a construct, explained by other service quality dimensions constructs, and as a predictor of consumer satisfaction and loyalty.

Customer satisfaction (CS) was the subject of 13 papers. Similar to the papers addressing service quality (SQ) discussed above, all contributions can be divided into two areas: papers where CS was conceptualized using text processing tools and papers on quantitative research where CS was measured based on an online survey. Additionally, in one study, CS was researched using interviews [35]. In two studies where text processing tools were employed, CS was quantified using sentiment analysis in which all the collected reviews were scanned against a list of positive and negative words. In a more recent study, Ding et al. [36] separately analyzed positive and negative reviews.

Similar to studies dealing with service quality, in most of the contributions, satisfaction is researched from the guest perspective, hence the consumer satisfaction (CS), which is in line with the general hospitality literature. Still, Thaichon et al. [35] attempted to determine the factors that influence both host and guest satisfaction, which is in line with the original sharing economy value cocreation notion, in which renting a room results not only in economic exchange but also in mutually enriching social interaction.

In the remaining 10 papers, CS was measured using customer opinions. SEM was applied in nine papers. CS was conceptualized either as a construct, with the number of measurements varying from 2 [37] to 7 [29] in five papers or as a single measurement in the remaining studies. Usually, satisfaction was explained by constructs that relate to tangible service quality and social interactions between guest and host, while CS was used mostly as a predictor of repurchase intention.

An overview of the use of service quality and consumer satisfaction in SEM research conducted in the field of sharing economy accommodation is presented in Supplementary Table S1 while key relationship constructs are depicted in Table 2.

From a methodological perspective, the analyzed papers investigated P2P accommodation settings from two main perspectives. In the first group (five papers), the research sample consisted of respondents who had an Airbnb experience. In general, consumer behavior was explored, i.e., results are not confined to any particular destination. Respondents were from Taiwan [14], the U.S.A., Canada [12], and Germany [15], and in two cases, the location was not specified. In three articles, the respondents were recruited using Amazon's Mechanical Turk (MTurk), an online survey application, which is used by businesses to outsource jobs to those who can perform these tasks virtually [12,38]. In three other sources, students constituted the respondent group [9,14,15]. In two other articles, tourists visiting Phuket, Thailand, were chosen [13,34]. While most of these papers deal exclusively with Airbnb accommodation settings, the paper by [14] compares Airbnb and hotel service quality settings. In addition to Airbnb, Möhlmann's paper [15] also explores the determinants of choosing another sharing economy platform—Car2go—a car-sharing service. The number of respondents ranged from 202 to 614.

Implications	Sources
$SQ \rightarrow loyalty$	[9,13]
Tangibles $\rightarrow$ SQ	[13,34]
Understanding & caring (social interaction) $\rightarrow$ SQ	[13,29,34]
Information Quality (IQ) $\rightarrow$ Satisfaction	[37]
Satisfaction $\rightarrow$ Purchase Intention (PI)	[14,37,39,40]
$SQ \rightarrow Satisfaction$	[14,15]
Amenities $\rightarrow$ CS	[38]

**Table 2.** Key construct relationships in P2P hospitality literature (supporting literature for cocreation factors).

Based on the systematic literature review, the following research gaps have been identified.

- 1. The research in all studies included in our review was conducted with the use of online tools. Conducting online research is certainly cost- and time-effective and enables a larger sample that may consist of respondents from diverse geographical areas. Moreover, web surveys do not suffer from interviewer bias and can be completed at the respondents' convenience [41]. Additionally, the use of platforms such as MTurk or Qualtrics enables researchers to include a small monetary incentive, facilitates the inclusion of verification questions, and prevents duplicate participation. The use of online tools also has its drawbacks, such as the exclusion of individuals who have no access to or have difficulties with internet use which may provide different results [42]. As there is no research that compares the use of online and offline tools either in hospitality markets or in P2P markets, one can only speculate about the potential bias with the use of either method.
- 2. All 19 contributions are based on Airbnb data, and in 13 contributions the name of Airbnb is even present in the article's title. In three studies, Airbnb is compared with traditional hospitality [40,43,44], while in one paper, Airbnb data are compared with another sharing economy platform [15]. Drawing conclusions from Airbnb data for the whole P2P accommodation market is warranted in the case of urban destinations where this market has surged after the introduction of this sharing economy platform. Tourists who use Airbnb and other sharing economy platforms are usually innovative, highly educated, and have a higher income than average [45]. Conversely, in leisure destinations, which have a higher share of repeat visitors and longer average lengths of stay, other more traditional distribution channels are used more often [46]. Therefore, research results regarding Airbnb users cannot always be generalized to the whole P2P market.

## 2.4. Conceptual Model and Hypothesis Development

As shown in the systematic literature review SLR analysis, the link between service quality and consumer satisfaction is easy to observe, as the latter is defined as the difference between product performance and an evaluative standard [47]. In the realm of the P2P accommodation market, the SLR shows that service quality is divided into various constructs that are related to the social interactions between host and guest (empathy, experience, social value, cocreation), the hospitality product (amenities quality, information quality, location, cleanliness, price/value, financial info security, internet capability, location, safety), and other factors, such as platform service quality.

In order to understand and compare the findings of previous studies, it is essential to analyze the measurement items, as, in many cases, constructs of similar names consist of very different data. For example, the construct "service quality" can be related to host behavior [9], the quality of intermediary services provided by a sharing economy platform [15], or both the tangible and intangible aspects of P2P service [30].

## 2.4.1. Host Service Quality

According to Airbnb and many other intermediaries, an authentic experience is one of the key advantages of P2P accommodation. A taste of local culture, interaction with local life, and a personal relationship with hosts are often said to be key factors in determining customer satisfaction [40].

Hosting behavior was added by C. V. Priporas, Stylos, Rahimi, et al. [34] to the construct "understanding and caring", which comprises flexibility, friendliness, individual attention, and assistance. In their I-P analysis, they also included hosting area, in addition to check-in flexibility, response speed, helpfulness, extra help, and friendliness. The same approach was adopted by Ranjbari et al. [30]. In this vein, Ju et al. [12] found that host service quality had a high impact on customer satisfaction based on both tourist review analysis and an econometric model. In the construct "host service quality", they included

hosts' friendliness, helpfulness, ability to make guests feel at home, and ability to address the guests' interests. Two constructs in the field of host service quality were adopted by Lalicic & Weismayer [9], one being related to social interactions between host and guest ("hospitality hosting behavior") and the other ("service quality") to hosts' responsiveness, assurance, empathy, and reliability. Tajeddini et al. [44] adopted a very similar approach.

Another group of contributions emphasized the importance of social interactions between host and guest. For example, Lee & Kim [48] stated that product involvement plays a moderating role between hedonic value and CS. In this vein, Sthapit et al. [39] identified a "co-creation" construct that involved the measurement of interactions between hosts and guests, while Thaichon et al. [35] and Moon et al. [29] proved that human interaction was beneficial for both guests and hosts. A slightly different approach was adopted by Kreeger et al. [38], who were able to prove that "empathy" shown by personnel has a positive effect on business travelers' satisfaction.

Ding et al. [36] were the first to observe that different types of Airbnb properties are associated with different satisfaction components. Importantly, they showed that "homelike experience" and "help from hosts" are valued mostly by visitors of shared rooms and private rooms, whereas guests renting an entire property or hotel rooms tend to value "room size" and "amenities" much more. This leads us to the following hypothesis:

#### **Hypothesis 1 (H1).** Host service quality has a positive impact on overall customer satisfaction.

# 2.4.2. Facility Service Quality

Facility service quality refers mostly to the tangible elements of an accommodation product. The connection between a guest's opinion of an apartment's amenities, space and appearance, and consumer satisfaction has a long history in hospitality. The very foundation of major hotel classification schemes is based on the availability of services, size of a room, and room amenities, as these are factors that can be objectively assessed by a committee that grants the hotel the right to use stars in their marketing. The importance of these elements to customer satisfaction has already been widely analyzed in general hospitality research [49]. In the P2P hospitality market, these elements are depicted and photographed on intermediaries' platforms and widely covered providers' websites in order to inform clients and create corresponding expectations.

In our SLR, the tangible elements of a hospitality product are featured in almost all research contributions that are related to a particular hospitality experience. Similar to the host service quality discussion above, the names of the construct in SEM research and the collections of items vary across the examined research papers. The constructs were named "Lodging service quality" [14] and "Tangibles" in [13,34]. Ranjbari et al. [30] used two constructs: "Accommodation and facilities" and "Neighborhood", while Kreeger et. al. [38] used three constructs, "Amenities", "Location", and "Cleanliness". In our research, we followed the approach of Ju et. al. [12] and adopted "Facility service quality" in order to avoid creating more academic confusion in P2P research. Factors often included in those constructs were the following: "Location" [12,38], "Furnishings and equipment" [30,38], "Unit security" [30], "Cleanliness" [12,30,38] "Decoration" and "View" [30]. A different approach was observed in [13,34], who mentioned tangibles where they asked about food and beverages, adequacy of capacity, equipment, materials, and atmosphere. The contributions that were based on sentiment analysis, i.e., the results of which were based on the review analysis, identified other factors as well that could be added to this list: "sleep disturbance" [31,36] and "thermal management" [31]. All these contributions proved that facility service quality impacts consumer satisfaction. Hence, the second hypothesis:

**Hypothesis 2 (H2).** Facility service quality has a positive impact on overall customer satisfaction.

This study argues that service quality measured by two independent variables: host service quality and facility service quality has a positive impact on tourist satisfaction (Figure 1).

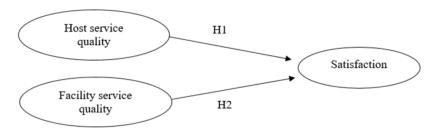


Figure 1. A framework of the determinants of consumer satisfaction in P2P accommodation.

#### 3. Research Design

## 3.1. Data

The research was conducted in Croatia, more specifically in 10 Croatian counties, covering both coastal and mainland regions of the country as part of the project Focus on Quality in Household Accommodation—Guest Perspective. In Croatia, the majority of overnights and arrivals are realized in the coastal regions, but the mainland regions were also included in this research in order to take into account the diversity of the sample. When observing the accommodation capacity in Croatia, the importance of P2P accommodation becomes clear. This type of accommodation accounted for 60.9% of beds offered to tourists in all accommodations in Croatia in 2020. A comparison was made with Italy, Spain, Greece, France, and Portugal, the competitive tourism countries in the Mediterranean. The percentage of beds in P2P accommodation is the highest in Italy (34.9%), Greece (27.9%), and Spain (24.6%), followed by France (19.0%) and Portugal (15.7%) [50]. According to Eurostat data for 2019, the most overnights in P2P accommodation were recorded in Croatia (50%), France (25.8%), Greece (24.9%), Italy (22.3%), Spain (17.5%) and Portugal (13.9%) [50].

## 3.2. Variables and Measures

The research focused on the development of a measurement tool, a structural questionnaire that can be used to measure service quality in P2P accommodations. The target population of this study were guests staying in P2P accommodation, which, according to Eurostat category 55.2, includes four categories: rooms, apartments, studio-type suites, and holiday homes [50]. This classification was chosen to make the data comparable with other EU countries. In this study, all P2P accommodation platforms such as Airbnb, Booking.com, and Expedia, direct contact with the host, or booking through travel agencies were considered.

Given the specificity of the 2020 tourist season and the unfavorable epidemiological situation, the sample in this study is somewhat smaller than in previous studies. Hair et al. [51] indicate that the sample should include 100 or more respondents and note that the recommended sample size should be at least five times the number of variables analyzed. Another suggestion for sample size is at least 10 cases for each item, and the ratio of subjects to variables [STV] should not be lower than 5 [52]. The study was conducted using an offline questionnaire provided in four languages (Croatian, English, German, and Italian). The sample included tourists from 17 countries. Multiple choice questions were used to rate overall satisfaction and service quality on a Likert scale from 1 to 5. A protest was conducted on a sample of 10 respondents, including hosts and people who have used P2P accommodations in the past. The questionnaire was corrected based on the suggestions.

A tourist survey was conducted during the summer months of 2020 (from July to September). The questionnaires were distributed to interviewers who were in contact with private owners and guests who chose this segment of the offering. The research was conducted in collaboration with seven interviewers, previously educated in the responsible conduct of research and in relation to the objectives and purpose of the study.

Renters/hosts from all over the country, providing different types of facilities, were included in the research. The analysis was conducted on a sample of 168 tourists who stayed in P2P accommodations.

# 4. Results

# 4.1. Survey Participants

Descriptive statistics used to examine the demographic and travel characteristics of the sample are shown in Supplementary Table S2.

Most of the respondents who participated in the study and stayed in P2P accommodation were women (53.7%). The sample indicates that over 50% of the respondents were between the ages of 20 and 39. The majority of respondents were from Croatia and other nearby countries accessible by car (Germany, Italy, Austria, and Slovenia). As the study was conducted during the pandemic tourism season of 2020, the share of domestic overnights in Croatia increased at the expense of foreign tourists due to the unfavorable epidemiological situation and travel threats during this period. A similar situation is observed in the sample of our study.

Examining the travel characteristics of the sample, it is possible to observe that guests mostly stayed in apartments (58.9%) and rooms (19.0%) and booked their vacations largely using platforms such as Booking.com (29.5%), Airbnb (20.1%), and Expedia (1.9%). A third of the guests (32.7%) booked their accommodation through direct contact with the host, a possible reason for this being the current epidemiological situation related to COVID-19 and the interest of guests to obtain comprehensive information about epidemiological conditions at the destination in direct contact with the host. Overall, the 2020 tourism season was specific because of COVID-19. The safety and health of guests are paramount. P2P accommodation, unlike other tourist facilities, offers absolute privacy and a home-like atmosphere, which was a great advantage of this type of accommodation during COVID-19.

#### 4.2. Exploratory Factor Analysis

Factor analysis was performed to define the variables in the model by extracting the factors. The analysis resulted in three factors extracted from 18 items. The Kaiser-Meyer-Olkin measure is 0.874, which indicates that the excluded factors contain enough variables. A strong correlation between variables and factors was demonstrated by the significance of Bartlett's test (p < 0.01). A rotated component version was used to provide a reliable content interpretation. Of the three factors that resulted from the factor analysis, two factors were interpreted and later used in the research, and one factor was excluded from further analysis. Since the third factor, which contained six items, could not be interpreted in theory or practice, and had no meaningful relationship within the extracted items or to this or previous research, it was decided to exclude it from further analysis. Factor analysis is a cyclical process in which solutions are continuously refined and compared until the most meaningful solution is reached [53,54]. The following factors were deleted from the matrix within the third factor: "I am well informed about the services", "I am well informed about the offering in the destination (info map)", "Internet connection in this property is free, Internet connection in this property is fast", "The property is clean and tidy", and "The property has a landscaped natural environment".

The remaining two factors explained about 55.5% of the variance. Most factor loadings were higher than 0.50, indicating a high correlation between the extracted factors and their items. Tabachnick and Fidell [53] suggest that correlations greater than 0.30 are sufficient to justify the formation of factors. The factors were named according to the characteristics of the variables that compose them, as follows: Factor #1: host service quality, Factor #2: facility service quality (Table 3).

Items ( <i>n</i> = 10)		tors		
		2	Communalities	
The host responds promptly to the guest's inquiries and is always ready to assist the guest	0.769		0.714	
The host has an individual approach to the guests	0.768		0.699	
The renter/host has the necessary knowledge to fulfill the requirements of the guest	0.739		0.765	
The host is always ready to help the guest	0.584		0.606	
The property is well equipped		0.774	0.706	
The property has a modern and attractive appearance		0.757	0.690	
The location of the property is good		0.564	0.414	
The property retained its authenticity		0.554	0.658	
The contents and appearance of the property correspond to the information on the sales channels		0.547	0.669	
The property is spacious/comfortable		0.481	0.449	
Eigenvalue	6.594	1.507	8.101	
% of variance	38.790	8.864	55.553	
Cronbach's alpha	0.831	0.807	0.897	
Number of items	4	6	10	

Table 3. Factor analysis and reliability analysis results of service quality in P2P accommodation.

The results of the reliability analysis showed good internal consistency of the factors, as Cronbach's alpha coefficients of the exchanged factors were 0.807 and 0.831, well above the minimum value of 0.60 [49]. The Cronbach's alpha for the scale showed high reliability of 0.897.

To determine the relationship between the dimensions of service quality and overall customer satisfaction, a correlation analysis was performed.

The Spearman coefficient was used to show the relationship between the correlations of the two variables with the one dependent variable (Table 4). The value of this test is in the interval  $-1 \le r \le +1$ , where the - sign indicates a negative (inverse) correlation, while the + sign indicates a positive correlation [55]. The higher the value of the Spearman correlation coefficient, the stronger the correlation between the variables (more significant).

**Table 4.** Spearman's correlation coefficients between independent (Host service quality and Facility service quality) and dependent variables (Satisfaction).

Independent Variables	Satisfaction (Dependent Variable)		
Host service quality	Correlation Coefficient Significance	0.602 ** 0.000	
Facility service quality	Correlation Coefficient Significance	0.582 ** 0.000	

\*\* Correlation is significant at the 0.01 level (2-tailed).

Spearman correlation analysis was used to sufficiently confirm the relationship between the two variables. There is a positive correlation between facility service quality and satisfaction (r = 0.582, p < 0.001) and between host service quality and satisfaction (r = 0.602, p < 0.001). Both correlation coefficients show a moderate positive relationship.

To test the main research hypothesis, a multiple regression analysis was performed to determine the influence of the independent variables (two dimensions extracted in factor analysis) on the dependent variable (overall customer satisfaction). Overall satisfaction with the service provided was measured with two variables: "How satisfied are you with your stay?" and "Compared to the money you have spent, how satisfied you are with your stay".

The coefficient of determination ( $\mathbb{R}^2$ ) represents the proportion of variance explained by the regression model [51]. It can take values between 0 and 1. The higher its value, the better the regression model predicts the dependent variable (Table 5).

Model Fit				
Widdel Fit				
Multiple R	0.676			
$R^2$	0.457			
Adjusted R <sup>2</sup>	0.451			
Standard error	0.49008			
F ratio	65.769			
Significance	0.000			
Independent variable	b	Beta	t	Sig.
Constant	1.100		3.644	0.000
Host service quality	0.331	0.330	4.299	0.000
Facility service quality	0.459	0.416	5.430	0.000

Table 5. Multiple regression analysis.

Predictors: (Constant) Facility service quality, Host service quality; Dependent Variable: Customer Satisfaction.

The results show a strong relationship (R = 0.676) within the model. According to the coefficient of determination ( $R^2 = 0.457$ ) and the adjusted coefficient of determination (adjusted  $R^2 = 0.451$ ), 45.7% of the variance for achieving guest satisfaction in P2P accommodations can be explained by the variables "Host service quality" and "Facility service quality".

In addition, the F ratio (F = 65.769, p < 0.001) indicates that the regression model statistically significantly predicts guest satisfaction in P2P accommodations. This means that this combination of independent variables significantly predicts the dependent variable, i.e., "Facility service quality" and "Host service quality" successfully explain "Customer Satisfaction". The predictive power of the two independent variables of the multiple regression model analyzed is justified since the independent variables contribute statistically significantly to the model. The variable Facility service quality has visibly higher predictive power in explaining the dependent variable "Customer satisfaction" (b2 = 0.416, t = 5.430, p < 0.001) followed by Host service quality (b1 = 0.330, t = 4.299, p < 0.001) (Figure 2).

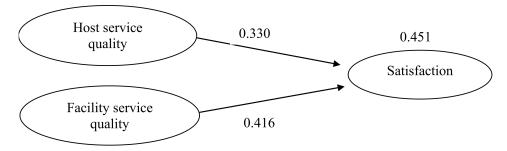


Figure 2. Multiple regression analysis results.

Since facility service quality has been shown to have a greater impact on guest satisfaction, hosts should focus on improving this segment of the offering. Although the host's service quality had a somewhat smaller impact in this study, it has been shown to still have an impact on guest satisfaction, and for this reason, this aspect of service should also be taken into consideration.

As a majority of previous contributions were based on Airbnb data, we decided to conduct a multigroup analysis between respondents that booked the property through the Airbnb application (20.1%) and those that used other P2P accommodation platforms (Booking.com, Expedia, direct contact with the host or travel agents) (79.9%). A multigroup analysis was performed using the Mann–Whitney test, and it was found that there was no statistically significant difference (U = 1874, p = 0.932) in the satisfaction of guests staying in Airbnb accommodation and guests staying in other types of P2P accommodation. The observed difference in average ranks (Airbnb= 77.55, Other P2P = 76.86) is considered random; that is, its statistical significance was not demonstrated. Furthermore, to compare the differences between two groups in independent variables, the Mann–Whitney test

was used. Based on the test results, it was found that there was no statistically significant difference in the perception of host service quality (U = 1755, p = 0.520) and facility service quality (U = 1836, p = 0.801).

# 5. Discussion

# 5.1. Theoretical Implications

In view of the rapid growth of P2P tourism that has only been temporarily impeded by COVID-19, this study conducted a systematic literature review to identify the research gaps in the service quality research in this field. Previous research on service quality in the P2P hospitality market was conducted based almost exclusively on Airbnb data and data collected online. Moreover, a vast majority of contributions were based on pre-pandemic data. To address these research gaps, we conducted offline research with 168 questionnaires collected in the first year of the pandemic. As questionnaires were collected onsite, we were able to measure customer perception of service quality not only from Airbnb users but also from those who used other distribution channels in the P2P accommodation market.

This study articulates two major dimensions of service quality (host and facility) that determine consumer satisfaction. Although our research does not determine new service quality attributes, it validates existing dimensions in an offline pandemic environment. We were able to confirm a positive relationship between both host and facility service quality and customer satisfaction, which was also observed in previous studies [13,31,34]. Our findings are also in line with the work of Lalicic and Weismayer [9], where a relationship between satisfaction and loyalty has been established. We demonstrated that the importance of service quality attributes in the P2P accommodation market is in line with previous research based only on Airbnb data alone. Moreover, this study contributes to the existing literature by testing a relationship between service quality and consumer satisfaction in the P2P accommodation market in an offline environment. Therefore, our findings are instrumental in facilitating future P2P quantitative research applications.

## 5.2. Practical Implications

Our findings may assist industry practitioners in prioritizing service attributes for P2P strategic accommodation management, as shown in Table 3. Both facility and host service quality impact the overall customer satisfaction, but each service quality dimension contributes differently to the overall satisfaction, which may later affect future postconsumption behavior and word-of-mouth. The findings are also vital for the entire hospitality industry, as they delineate the differences between the distribution channels. More importantly, there are no differences between factors that impact satisfaction between guests that use Airbnb and those who do not use them to purchase a hospitality service. Our research was based on data from questionnaires handed out to guests after their visit to accommodation establishments, and the results are in line with previous studies based on online research tools. As a result, building a market segmentation based on distribution channels is ineffective, which might be of paramount importance to small providers with a very limited marketing budget. Furthermore, we found that the relationship between service quality and customer satisfaction in the P2P accommodation market did not change during the recent COVID-19 pandemic, as our results are consistent with findings from previous research.

## 6. Conclusions

It was found that host service quality and facility service quality significantly influence the guests' satisfaction with the service offered in P2P accommodations. The host service quality dimension is specific to P2P accommodations because hotels, hostels, camps, and other types of accommodations have trained staff who perform their work in contact with the guest. In P2P accommodation, the host is the person who most commonly performs all of the above tasks. Hosts should be available to the guest before, during, and after the stay; they should have a personal approach, possess the necessary knowledge and skills, and always be at the guest's disposal. This dimension has been shown to have a significant impact on guest satisfaction. Facility service quality has a stronger influence on guest satisfaction. In P2P accommodations, it is particularly important to consider the quality of the service provided, taking into account national criteria and additionally introducing quality label criteria that can improve the service delivery process.

# 7. Limitations

This study encounters a number of limitations, most notably the sample size. The study was conducted with offline surveys in the wake of a global pandemic caused by the Coronavirus. This type of accommodation was of particular interest to tourists during this period due to its remoteness, privacy, and accessibility. Because of the situation and the advantages of this type of accommodation at the time of the pandemic, it is possible that guests who would not otherwise choose this type of accommodation did so. The location is also one of the limitations of the study, as the survey was conducted in only one country, which may mean that the results cannot be generalized to other countries. We believe that the study should be expanded in theoretical and practical terms by focusing on the process of service delivery and guest satisfaction.

**Supplementary Materials:** The following supporting information can be downloaded at: https://www.mdpi.com/article/10.3390/su141710734/s1. Table S1. Operationalization of service quality (SQ) and consumer satisfaction (CS) in sharing economy accommodation quantitative research. Table S2. Demographic and travel characteristics of the sample.

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